

Optimizing Transitions of Care

for Venous Thromboembolism (VTE)



Closing the Gaps in Care

While efforts have been made to improve coordination across the VTE prophylaxis spectrum (specifically post orthopedic surgery), gaps still remain. Even within each inpatient setting, communication deficits often exist among nursing staff, orthopedic surgeons, attending physicians, and hospital pharmacies. This may result in challenges in patient management.

One barrier is that different physician groups may have different protocols for VTE prophylaxis. Lack of electronic health records may also be a barrier to fully integrated care and real-time data interchange, which has proven to be valuable in patient care.¹ With the implementation of two Surgical Care Improvement Project (SCIP) measures related to VTE prophylaxis, hospitals are currently active in measuring and reporting VTE prophylaxis protocol performance.^{2,3}

- SCIP VTE-1: Surgery Patients with Recommended VTE Prophylaxis Ordered³
- SCIP VTE-2: Surgery Patients Who Received Appropriate VTE Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery³

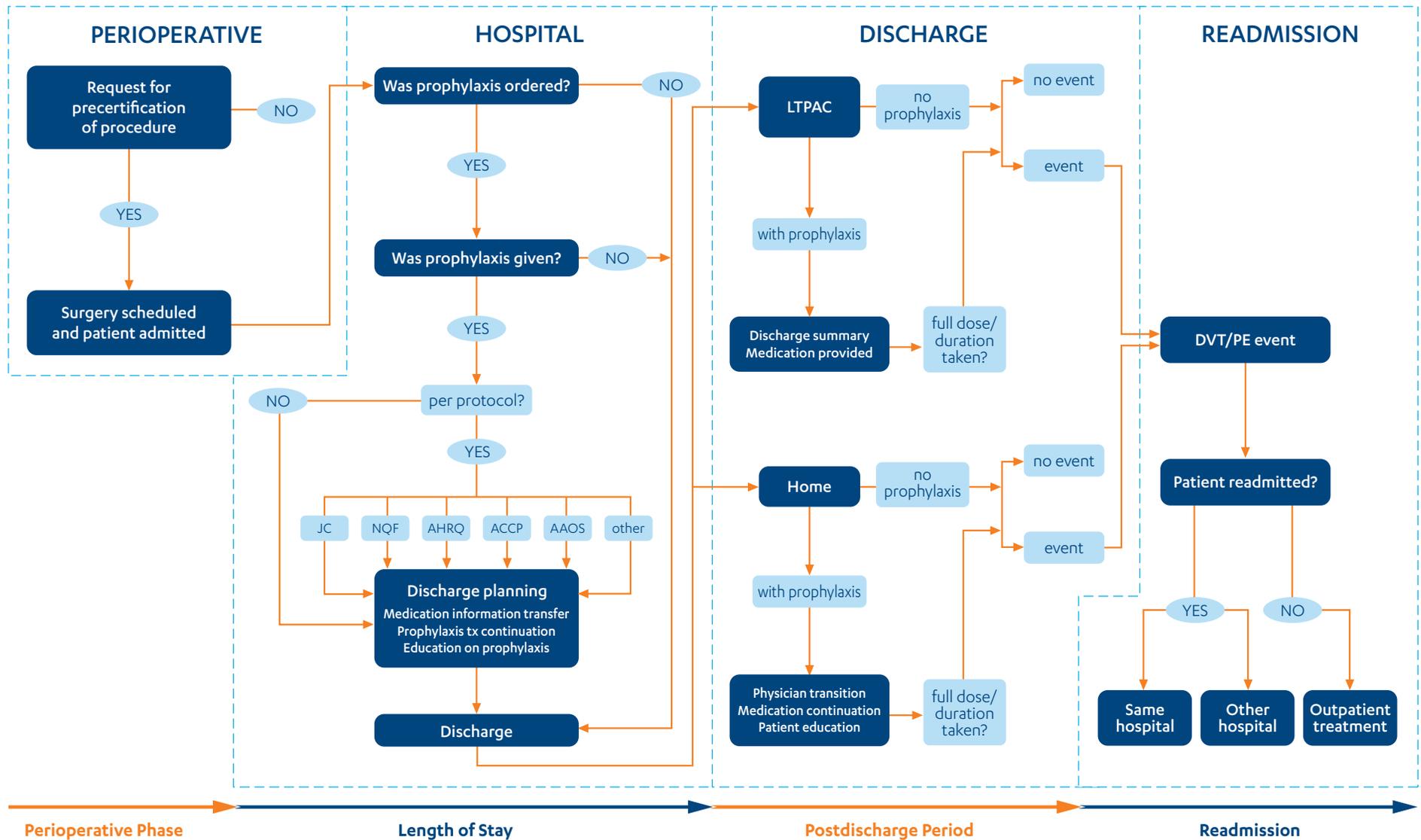
For additional information, please visit www.jointcommission.org.

For fiscal year 2009, the Centers for Medicare & Medicaid Services (CMS) added VTE following total hip replacement (THR) and total knee replacement (TKR) surgeries to its list of hospital-acquired conditions (HACs), defined as conditions that are not present upon admission to the hospital and are reasonably preventable by adherence to evidence-based guidelines.⁴ CMS will no longer pay for secondary diagnoses reflective of VTE in these cases and instead will only pay the hospital for the admitting diagnosis-related group.⁴ Many commercial health plans are following CMS and not paying for some preventable medical conditions or errors.

Effective communication is at the heart of improved VTE prophylaxis. As the population ages and the number of patients with chronic diseases rises, it becomes increasingly important to streamline communication across the healthcare continuum in order to improve care and patient outcomes. As patients move through the healthcare system, collaboration among all care touch points is crucial for providing efficacious, efficient, and quality care.⁵

The chart on page 3 shows four key phases in the VTE Prophylaxis Process Flow in Orthopedic Surgery Patients: perioperative, hospital, discharge, and readmission. Each phase contains its own unique barriers to VTE prophylaxis as well as opportunities to improve care and communications at key intervention points.

VTE Prophylaxis Process Flow in Orthopedic Surgery Patients

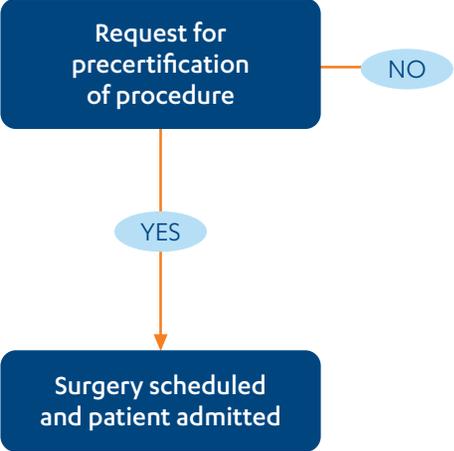


Abbreviations: AAOS, American Academy of Orthopaedic Surgeons; ACCP, American College of Chest Physicians; AHRQ, Agency for Healthcare Research and Quality; DVT, deep vein thrombosis; JC, Joint Commission; LTPAC, long-term and post-acute care; NQF, National Quality Forum; PE, pulmonary embolism; tx, treatment; VTE, venous thromboembolism.

Adapted from Maynard G, Stein J. *Preventing Hospital-Acquired Venous Thromboembolism: A Guide for Effective Quality Improvement*. Rockville, MD: Agency for Healthcare Research and Quality; 2008. Publication No. 08-0075. <http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/vtguide/vtguide.pdf>. Accessed January 20, 2017.

Perioperative Phase

For these purposes, the Perioperative Phase encompasses the presurgical phase through hospital intake/admission and surgery.

Process Flow	Potential Intervention Point	Barrier	Potential Intervention
 <pre> graph TD A[Request for precertification of procedure] -- NO --> B((NO)) A -- YES --> C[Surgery scheduled and patient admitted] </pre>	<p>1. Time between precertification and patient admission to hospital</p>	<ul style="list-style-type: none"> Insufficient communication between the health plan, patient, and healthcare professional (HCP) may fail to uncover key VTE risk factors 	<ul style="list-style-type: none"> Use VTE screener to assess patient’s risk for VTE before admission Educate patient on the importance of VTE prophylaxis Coordinate cost and access to prophylaxis medication Perform full patient intake and discuss findings with the extended medical team to address any potential complications prior to surgery Educate the patient about elevated risk for VTE as a surgical candidate and how this risk may be mitigated
	<p>2. Time between surgery and prophylaxis ordered</p>	<ul style="list-style-type: none"> If appropriate prophylaxis is not ordered in a timely manner, the patient may be discharged without it, thereby missing the opportunity to help minimize the patient’s potential risk for VTE post discharge 	<ul style="list-style-type: none"> Increase communication between the key healthcare providers to ensure that the most appropriate prophylaxis is ordered Utilize the prophylactic standing order form to increase the likelihood that it will be prescribed For healthcare systems with electronic charts, electronic reminder messages should be utilized to cue staff

Abbreviation: VTE, venous thromboembolism.

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Hospital Phase

The Hospital Phase encompasses all care provided in the hospital, including preoperative care, surgery, and postoperative recovery up to discharge.

Process Flow	Potential Intervention Point	Barrier	Potential Intervention
<pre> graph TD Q1{Was prophylaxis ordered?} -- NO --> D[Discharge] Q1 -- YES --> Q2{Was prophylaxis given?} Q2 -- NO --> D Q2 -- YES --> Q3{per protocol?} Q3 -- NO --> D Q3 -- YES --> JC[JC] Q3 -- YES --> NQF[NQF] Q3 -- YES --> AHRQ[AHRQ] Q3 -- YES --> ACCP[ACCP] Q3 -- YES --> AAOS[AAOS] Q3 -- YES --> other[other] JC --> DP[Discharge planning Medication information transfer Prophylaxis tx continuation Education on prophylaxis] NQF --> DP AHRQ --> DP ACCP --> DP AAOS --> DP other --> DP DP --> D </pre>	<p>1. Time before prophylaxis ordered</p>	<ul style="list-style-type: none"> Nursing staff and attending physician may be reluctant to recommend prophylaxis to orthopedic surgeon If appropriate prophylaxis is not ordered in a timely manner, the patient may be discharged without it, thereby missing the opportunity to help manage the risk of VTE post discharge 	<ul style="list-style-type: none"> Train staff to understand VTE protocols and increase use of a standing order form for prophylaxis Implement protocol and make it automatic Increase open communication between the nursing staff, attending physician, and orthopedic surgeon Put high-risk patients on nursing report to ensure follow-up for prophylactic prescription and administration post discharge using VTE sticker on the Kardex or other filing system as per healthcare plan Increase communication between key healthcare providers to ensure that the most appropriate prophylaxis is ordered via dialogue, phone calls, communication sheets, etc
	<p>2. Time between prophylaxis ordered and given</p>	<ul style="list-style-type: none"> Prophylaxis not provided in a timely manner may result in otherwise preventable VTE 	<ul style="list-style-type: none"> Flag charts for patients at high risk for VTE to ensure they receive prophylactic medication as prescribed

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Hospital Phase (continued)

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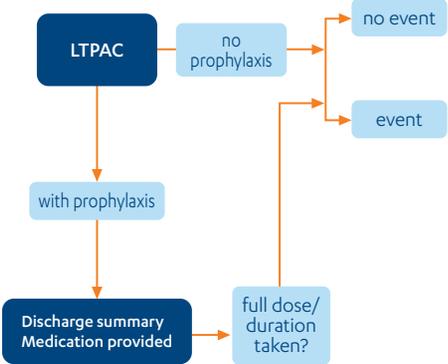
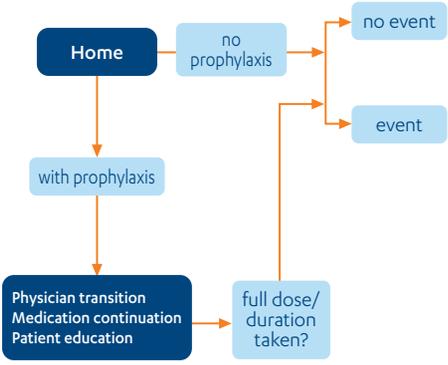
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	<p>4. Patient discharged/transferred with medication transfer order</p> <p>Patient provided with education about the prescribed prophylactic medication and risk of VTE</p>	<ul style="list-style-type: none"> Often the responsibility for patient education is pushed over to the next level of care (LTPAC), where it may be mistakenly assumed that prophylactic medication and education were provided in the hospital. This may result in the patient not receiving necessary education and being put at greater risk of developing VTE 	<ul style="list-style-type: none"> Educate staff about the importance of enhanced communication at the next level of care Provide patient with both verbal and written information about risks and proper VTE prophylaxis (patient brochure, fact sheets, etc) Discharge planner should communicate closely with the health plan case manager and patient's PCP to help ensure seamless transition

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Discharge Phase

The Discharge Phase encompasses all care provided in an acute-care or subacute-care facility through discharge to home or LTPAC facility.

Process Flow	Potential Intervention Point	Barrier	Potential Intervention
	<p>1. Patient arrives at LTPAC facility. Prophylaxis given as prescribed</p>	<ul style="list-style-type: none"> ■ Patient transferred without orders for prophylaxis ■ Patient delays receiving dosage due to <ul style="list-style-type: none"> ■ Delay in medication arriving from institutional pharmacy ■ Delay in receiving attending physician's order ■ Nursing error (omission) ■ Pharmacy request for clarification of order or change of drug prescribed 	<ul style="list-style-type: none"> ■ Train staff to understand VTE protocols and increase use of standing order for prophylaxis ■ Increase open communication between key members of the healthcare team across the continuum of care ■ Put high-risk patients on nursing report to ensure follow-up for prophylactic prescription and administration ■ Hand-off report includes medication reconciliation
	<p>2. During stay, prophylaxis given as prescribed</p>	<ul style="list-style-type: none"> ■ Prior to completing prescribed course of therapy, patient may discontinue use—potentially due to factors such as side effects, cost issues, or the physician order ending 	<ul style="list-style-type: none"> ■ Educate patient about the importance of complying with prophylaxis even after being discharged from the hospital and the increased risk of VTE if discontinued ■ To ensure patient's compliance with prophylaxis, work with attending physician to select an appropriate therapeutic alternative ■ Provide patient with both verbal and written information about risks and VTE prophylaxis (patient brochure, fact sheets, etc)

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Discharge Phase (continued)

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Process Flow	Potential Intervention Point	Barrier	Potential Intervention
	<p>3. Patient discharged to home. Discharge summary includes prescription for prophylaxis</p> <p>Patient provided with education about the prescribed prophylactic medication and risk of VTE</p>	<ul style="list-style-type: none"> ■ If adequate VTE prophylaxis education is not provided in the hospital, the patient may be at greater risk of developing VTE due to nonadherence to therapy ■ Prior to completing prescribed course of therapy, patient decides he or she no longer wants to inject prophylactic medication and discontinues use ■ Misalignment of incentives to effectively transition patients from inpatient to outpatient care ■ Patient fails to comply with prothrombin time (INR) monitoring ■ Patient is not informed of, or disregards, drug-to-drug or food interactions ■ Patient cannot get prescribed drug at his or her local pharmacy or finds it too costly 	<ul style="list-style-type: none"> ■ Ensure the patient’s prescription for VTE prophylaxis has been ordered at his or her community or specialty pharmacy to help prevent missed or delayed dosing ■ Educate patient about signs of VTE. Provide patient with both verbal and written information about risks and VTE prophylaxis (patient brochure, fact sheets, etc) ■ Home healthcare services should ensure patient is using prophylaxis as prescribed ■ Discharge planner should communicate closely with the health plan case manager, patient’s HCP, and home healthcare services to help ensure seamless transition using tools and checklists developed by integrated health systems ■ Educate staff about quality initiatives and pay-for-performance (P4P) incentives that reward coordinated care and good outcomes

Abbreviations: HCP, healthcare professional; LTPAC, long-term and post-acute care; VTE, venous thromboembolism.

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Readmission Phase

The Readmission Phase usually can be eliminated with strong VTE education and prophylaxis protocols.

Process Flow	Potential Intervention Point	Barrier	Potential Intervention
<pre> graph TD A[DVT/PE event] --> B{Patient readmitted?} B -- YES --> C[Same hospital] B -- YES --> D[Other hospital] B -- NO --> E[Outpatient treatment] </pre>	<ol style="list-style-type: none"> Patient experiences DVT or PE while at LTPAC facility or home and is readmitted to hospital 	<ul style="list-style-type: none"> ■ Patient may not have been receiving prophylaxis as prescribed or it may have been discontinued too soon ■ Patient may have been noncompliant with VTE prophylactic regimen ■ If patient is discharged to a different LTPAC facility or admitted to a different hospital, the medical history may not follow him or her, increasing the risk for complications like VTE 	<ul style="list-style-type: none"> ■ Ensure all prophylaxis is given as prescribed ■ Follow up with receiving hospital to clarify anything in the chart, especially prophylactic prescription ■ Repeat steps noted in hospital and discharge phases ■ Preadmission assessment by LTPAC facility
	<ol style="list-style-type: none"> Patient experiences DVT or PE while at LTPAC facility or home and is not readmitted to hospital 	<ul style="list-style-type: none"> ■ Asymptomatic VTEs are often not diagnosed. Patient is in danger of developing a potentially fatal PE 	<ul style="list-style-type: none"> ■ Counsel patient on signs and symptoms of VTE post discharge ■ Health plan case manager must keep watchful eye on patient and arrange for HCP to follow patient closely for recurrence

Conclusion

Organizations have a unique opportunity to collaborate to identify best practices and improve performance by optimizing the entire continuum of care. The *Optimizing Transitions of Care Guide* can assist you in identifying care gaps and opportunities for improvement as well as P4P programs to incentivize high performers.

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